



THE LOST WAX TECHNIQUE OF DOKRA ART: AN EMPIRICAL STUDY ON BIKNA VILLAGE OF DISTRICT BANKURA, WEST BENGAL

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ABSTRACT

Among the famous artistic works of Bankura District of West Bengal, Dokra (also known as Dhokra) is an age old traditional non-ferrous metal art of Indian Subcontinent. The term ‘ ‘Dokra’’ generally describes a group of craftsmen, nomadic in nature who spread over the different states i.e. Andhra Pradesh, Chhattisgarh, Orissa, Madhya Pradesh, Jharkhand and West Bengal. Dokra is characterized by its simple and primitive figurines on folk themes, variety of beautifully decorated deities and animal structures. The evidences of Dokra non-ferrous metal crafts trace back to the Harappan Civilization almost 4600 years ago. The dancing girl of Harappan Civilization is an ideal example of Dokra non-ferrous metal casting. This paper is mainly focused on the traditional lost-wax technique (Cire perdue in French) of Dokra metal art of Bikna village of District Bankura still practiced at present. Delighted to say, Dokra art from West Bengal has gained the Geological Indication (GI) Tag in the year of 2018. The present study is qualitative in nature and based on empirical research work on Bikna village involving interviews, oral history and observations. Both primary and secondary data sources were used to accomplish the work.

KEYWORDS: Dokra, Cire Perdue, Non- Ferrous Casting, Lost-Wax Technique

INTRODUCTION

The dancing girl figure of Mahenjo-Daro clearly depicts that the lost-wax technique (Cire perdue) was how much advanced in that protohistoric period to develop the non-ferrous metal casting of different complex shapes. (Agrawal, 1971)

The lost-wax technique also known as cire perdue in French, which is the metallurgical art work is not only flourished in India, but also was used in Mesopotamia, China, ancient Egypt and Greece. 14th to 16th centuries AD the Aztecs of Mexico used this technique and in 14th -19th centuries AD the lost-wax technique was used in Benin Kingdom in south- central Nigeria. Many modern sculptors have likely followed the way (Kochhar, 2011). Modern technology is undoubtedly based on the principles of science, and therefore there are improvements and modifications. On the other hand in traditional technology the empirical art of making different things depends on the total performances through the trials and are followed from generation to generations. A traditional craft which has continued their variety from the past through the history is the Dokra (Kochhar, 2011).

The Dokra artistic activities in Bikna village were started about 150 years ago. The people associated with the art probably migrated from Chotonagpur region and settled in Bikna village. There are nearly 70-75 households who are engaged in age old non-ferrous metal craft (Dhar, 2018).

OBJECTIVE

The central objective of this paper is to cover the technical aspects of making Dokra craft of Bikna village using lost-wax

technique.

MATERIAL AND METHODS

This research work is qualitative in nature and based on the immixture of empirical knowledge and secondary data sources. To enhance the knowledge and to conduct the research, a village survey was conducted for primary data collection through informal interviews and observations. Secondary data were collected from intensive literature review for historical and analytical purpose.

RESULT AND DISCUSSION

The making process of Dokra:

The French term ‘ ‘Cire perdue’’ technique, also known as lost wax casting, is an ancient metal casting method Which is very much practiced by the Dokra artists of Bikna village (locally called Shilpa Danga).

The lost wax casting method goes through two main processes in entire India, namely hollow casting method and solid casting method. The first one is usually found in central and eastern part of India while, the second one is predominant in the southern part of India. Among these two types the artists of Bikna prefer the hollow casting method, where the clay core is used for the craft.

Raw material: The brass and bell metal scrap, bee wax (mom), tar, dhuna (Sal tree extract), resin, wood, mustard oil and soil are the raw materials needed for the purpose.

Tools: Hammer, Tongs (locally called Chimta), Chisel or

Chheni (for refining), drill (for making holes, File or Sand paper, Buffing machines (for polishing), Gas welding machine and Furnace (called Bhatti) are the necessary tools used for creating this art work.

The process of Dokra craft is followed by a number of stages which are as follows:

Stage-1:

Clay core making: First of all a clay core is made in shape of the product to be created. This clay core is usually smaller than the final metal product. Sun drying or firing processes are used to make the clay core harder.

Stage-2:

Wax modeling: The clay core model is totally covered by two types of wax. One type is black wax mixture which is used as stripes for covering the clay core and another type red wax mixture is used for thin wires. The thin wires of the red wax is used for the final detailing of the product.

The black wax mixer is made of raisin and tar, which is boiled in an earthen pot and then strained by a piece of cloth and poured in a container full of normal water for making sheet and the sheet is again heated for making soft and used for covering the clay core as stripes. The red wax mixture is made of resin (dhuna) and bee wax(mom) and it is mainly used for find working on the model as threads.

Stage- 3:

Clay coating: A fine layer of clay used to cover model which creates actual impression of the final outcome. After thin or fine layer of the model, another layers of clay are added on it which makes the model more thicker and harder. This huge mould of soil is locally known as Chong. Each Chong contains a cavity for discharging of wax. Generally Chong is carefully heated in the furnace (Bhatti) for draining out of the wax from the mould. That is why this technique is called lost wax technique.

Stage-4:

Metal pouring: After de- waxing of the mould, molten metal is poured into the cavity and then mould is left for cooling to get a solid structure.

Stage-5:

Removal: The clay model is broken carefully and the actual product of metal comes out.

Stage-6:

Finishing: After removal of the final metal product, finishing as well as polishing processes are followed. First of all the excess metal or unnecessary edges from the cast are removed carefully. Then the sharp edges are smoothened. For polishing they use different types of abrasives to make the product shiny. Sometimes they also use chemicals for more shiny look.

CONCLUSION

Dokra is a unique lost wax method as well as a traditional craft, which highlights upon the creativity and aesthetic beauty of ancient art. The people of Bikna village of Bankura District

creates beautiful figurines, jewellery and different decorative items, show pieces reflecting their rich cultural heritage. Due to its primitive simplicity and folk motifs with a huge variety, Dokra art has achieved globally recognition for its unique style and cultural significance. This precious metal art is being preserved and promoted to continue for the future generations.

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